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SERVICE REGULATIONS AFFIXED TO THE INTERNATIONAL RADIOTELEGRAPH
CONVENTION, LONDON, 1912

[Translation]

1. Organization of Radio Stations

ARTICLE I

The choice of radio apparatus and devices to be used by the coastal stations and stations on shipboard shall be unrestricted. The installation of such stations shall as far as possible keep pace with scientific and technical progress.

ARTICLE II

Two wave lengths, one of 600 meters and the other of 300 meters, are authorized for general public service. Every coastal station opened to such service shall be equipped in such manner as to be able to use these two wave lengths, one of which shall be designated as the normal wave length of the station. During the whole time that a coastal station is open it shall be in condition to receive calls according to its normal wave length. For the correspondence specified under paragraph 2 of Article XXXV, however, a wave length of 1,800 meters shall be used. In addition, each government may authorize in coastal stations the employment of other wave lengths designed to insure long-range service or any service other than for general public correspondence established in conformity with the provisions of the convention under the reservation that such wave lengths do not exceed 600 meters or that they do exceed 1,600 meters.

In particular, stations used exclusively for sending signals designed to determine the position of ships shall not employ wave lengths exceeding 150 meters.

ARTICLE III

1. Every station on shipboard shall be equipped in such manner as to be able to use wave lengths of 600 meters and of 300 meters. The first shall be the normal wave length and may not be exceeded for transmission except in the case referred to under Article XXXV (paragraph 2).

Other wave lengths, less than 600 meters, may be used in special cases and under the approval of the managements to which the coastal and shipboard stations concerned are subject.

2. During the whole time that a station on shipboard is open it shall be able to receive calls according to its normal wave length.

3. Vessels of small tonnage which are unable to use a wave length of 600 meters for transmission, may be authorized to employ exclusively the wave length of 300; they must be able to receive a wave length of 600 meters.

ARTICLE IV

Communication between a coastal station and a station on shipboard shall be exchanged on the part of both by means of the same wave length. If, in a particular case, communication is difficult, the two stations may, by mutual consent, pass from the wave length with which they are communicating to the other regulation wave length. Both stations shall resume their normal wave length when the exchange of radiograms is finished.

ARTICLE V

1. The International Bureau shall draw up, publish, and revise from time to time an official chart showing the coastal stations, their normal ranges, the principal lines of navigation, and the time normally taken by ships for the voyage between the different ports of call.

2. It shall draw up and publish a list of radio stations of the class referred to in Article I of the convention, and from time to time supplements covering additions and modifications. Such list shall contain for each station the following data:

(1) In the case of coastal stations; name, nationality and geographical location indicated by the territorial subdivision and the latitude and longitude of the place; in the case of stations on shipboard; name and nationality of the ship; when the case arises, the name and address of the party working the station;

(2) The call letters (the calls shall be distinguishable from one another and each must be formed of a group of three letters);

- (3) The normal range;
- (4) The radio system with the characteristics of the transmitting system (musical sparks, tonality expressed by the number of double vibrations, etc.);
- (5) The wave lengths used (the normal wave length to be under-scored);
- (6) The nature of the services carried on;
- (7) The hours during which the station is open;
- (8) When the case arises, the hour and method of transmitting time signals and meteorological telegrams;
- (9) The coastal rate or shipboard rate.

3. The list shall also contain such data relating to radio stations other than those specified in Article I of the convention as may be communicated to the International Bureau by the management of the Radio Service ("administration") to which such stations are subject, provided that such managements are either adherents to the convention or, if not adherents, have made the declaration referred to in Article XLVIII.

4. The following notations shall be adopted in documents for use by the International Service to designate radio stations:

PG Station open to general public correspondence.

PR Station open to limited public correspondence.

P Station of private interest.

O Station open exclusively to official correspondence.

N Station having continuous service.

X Station having no fixed working hours.

5. The name of a station on shipboard appearing in the first column of the list shall be followed, in case there are two or more vessels of the same name, by the call letters of such station.

ARTICLE VI

The exchange of superfluous signals and words is prohibited to stations of the class referred to in Article I of the convention. Experiments and practice will be permitted in such stations in so far as they do not interfere with the service of other stations.

Practice shall be carried on with wave lengths different from those authorized for public correspondence, and with the minimum of power necessary.

ARTICLE VII

1. All stations are bound to carry on the service with the minimum of energy necessary to insure safe communication.

2. Every coastal or shipboard station shall comply with the following requirements:

(a) The waves sent out shall be as pure and as little damped as possible;

In particular, the use of transmitting devices in which the waves sent out are obtained by means of sparks directly in the aerial (plain aerial) shall not be authorized except in cases of distress.

It may, however, be permitted in the case of certain special stations (those of small vessels for example) in which the primary power does not exceed 50 watts.

(b) The apparatus shall be able to transmit and receive at a speed equal to at least 20 words a minute, words to be counted at the rate of 5 letters each.

New installations using more than 50 watts shall be equipped in such a way as to make it possible to obtain with ease several ranges less than the normal range, the shortest being approximately 15 nautical miles. Existing installations using more than 50 watts shall be remodeled, wherever possible, so as to comply with the foregoing provisions.

(c) Receiving apparatus shall be able to receive, with the greatest possible protection against interference, transmissions of the wave lengths specified in the present regulations, up to 600 meters.

3. Stations serving solely for determining the position of ships (radio-phares) shall not operate over a radius greater than 30 nautical miles.

ARTICLE VIII

Independently of the general requirements specified under Article VII, stations on shipboard shall likewise comply with the following requirements:

(a) The power transmitted to the radio apparatus, measured at the terminals of the generator of the station, shall not, under normal conditions, exceed one kilowatt.

(b) Subject to the provisions of Article XXXV, paragraph 2, power exceeding one kilowatt may be employed when the vessel finds it necessary to correspond while more than 200 nautical miles distant from the

nearest coastal station, or when, owing to unusual circumstances, communication can be established only by means of an increase of power.

ARTICLE IX

1. No station on shipboard shall be established or worked by private enterprise without a license issued by the government to which the vessel is subject.

Stations on board of ships having their port of registry in a colony, possession, or protectorate may be described as subject to the authority of such colony, possession, or protectorate.

2. Every shipboard station holding a license issued by one of the contracting governments shall be considered by the other governments as having an installation fulfilling the requirements stipulated in the present regulations.

Competent authorities of the countries at which the ship calls may demand the production of the license. In default of such production, these authorities may satisfy themselves as to whether the radio installations of the ship fulfill the requirements imposed by the present regulations.

When the management of the radio service of a country is convinced by its working that a station on shipboard does not fulfill the requirements, it shall, in every case, address a complaint to the management of the radio service of the country to which such ship is a subject. The subsequent procedure, when necessary, shall be the same as that prescribed in Article XII, paragraph 2.

ARTICLE X

1. The service of the station on shipboard shall be carried on by a telegraph operator holding a certificate issued by the government to which the vessel is subject, or, in case of necessity and for one voyage only, by some other adhering government.

2. There shall be two classes of certificates:

The first class certificate shall attest the professional efficiency of the operator as regards:

- (a) Adjustment of the apparatus and knowledge of its functioning;
- (b) Transmission and acoustic reception at the rate of not less than 20 words a minute;
- (c) Knowledge of the regulations governing the exchange of radio correspondence.

The second class certificate may be issued to operators who are able to transmit and receive at a rate of only 12 to 19 words a minute but who, in other respects, fulfill the requirements mentioned above. Operators holding second class certificates may be permitted on:

(a) Vessels which use radiotelegraphy only in their own service and in the correspondence of their crews, fishing vessels in particular;

(b) All vessels, as substitutes, provided such vessels have on board at least *one* operator holding a first class certificate. However, on vessels classed under the first category indicated in Article XIII, the service shall be carried on by at least two telegraph operators holding first class certificates.

In the stations on shipboard, transmissions shall be made only by operators holding first or second class certificates except in cases of necessity where it would be impossible to conform to this provision.

3. The certificate shall furthermore state that the government has bound the operator to secrecy with regard to the correspondence.

4. The radio service of the station on shipboard shall be under the superior authority of the commanding officer of the ship.

ARTICLE XI

Ships provided with radio installations and classed under the first two categories indicated in Article XIII are bound to have radio installations for distress calls all the elements of which shall be kept under conditions of the greatest possible safety to be determined by the government issuing the license. Such emergency installations shall have their own source of energy, be capable of quickly being set into operation, of functioning for at least six hours, and have a minimum range of 80 nautical miles for ships of the first category and 50 miles for those of the second. Such emergency installations shall not be required in the case of vessels the regular installations of which fulfill the requirements of the present article.

ARTICLE XII

If the management of the radio service of a country has knowledge of any infraction of the convention or of the regulations committed in any of the stations authorized by it, it shall ascertain the facts and fix the responsibility.

In the case of stations on shipboard, if the operator is responsible for

such infraction, the management of the radio service shall take the necessary measures, and, if the necessity should arise, withdraw the certificate. If it is ascertained that the infraction is the result of the condition of the apparatus or of instructions given the operator, the same method shall be pursued with regard to the license issued to the vessel.

2. In cases of repeated infractions chargeable to the same vessel, if the representations made to the management of the country to which the vessel is subject by that of another country remain without effect, the latter shall be at liberty, after giving due notice, to authorize its coastal stations not to accept communications proceeding from the vessel at fault. In case of disagreement between the managements of the radio service of two countries, the question shall be submitted to arbitration at the request of either of the two governments concerned. The procedure is indicated in Article 18 of the convention.

2. Hours of Service of Stations

ARTICLE XIII

(a) Coastal stations:

1. The service of coastal stations shall, as far as possible, be constant, day and night, without interruption.

Certain coastal stations, however, may have a service of limited duration. The management of the radio service of each country shall fix the hours of service.

2. The coastal stations whose service is not constant shall not close before having transmitted all their radiograms to the vessels which are within their radius of action, nor before having received from such vessels all the radiograms of which notice has been given. This provision is likewise applicable when vessels signal their presence before the actual cessation of work.

(b) Stations on shipboard:

3. Stations on shipboard shall be classed under three categories:

- (1) Stations having constant service;
- (2) Stations having a service of limited duration;
- (3) Stations having no fixed working hours.

When the ship is under way, the following shipboard stations shall have an operator constantly listening in: 1st, Stations of the first category; 2nd, Those of the second category during the hours in which they

are open to service. During the remaining hours, the last named stations shall have an operator at the radio instrument listening in during the first ten minutes of each hour. Stations of the third category are not bound to perform any regular service of listening in.

It shall fall to the governments issuing the licenses specified in Article IX to fix the category in which the ship shall be classed as regards its obligations in the matter of listening in. Mention shall be made of such classification in the license.

3. Form and Posting of Radiograms

ARTICLE XIV

1. Radiograms shall show, as the first word of the preamble, that the service is "radio."

2. In the transmission of radiograms proceeding from a ship at sea, the date and hour of posting at the shipboard station shall be stated in the preamble.

3. Upon forwarding a radiogram over the telegraph system, the coastal station shall show thereon as the office of origin, the name of the ship of origin as it appears in the list, and also when the case arises, that of the last ship which acted as intermediary. These data shall be followed by the name of the coastal station.

ARTICLE XV

The address of radiograms intended for ships shall be as complete as possible.

It shall embrace the following:

- (a) The name or title of the addressee, with additional designations, if any;
- (b) The name of the vessel as it appears in the first column of the list;
- (c) The name of the coastal station as it appears in the list.

The name of the ship, however, may be replaced, at the sender's risk, by the designation of the route to be followed by such vessel, as determined by the names of the ports of departure and destination or by any other equivalent information.

2. In the address, the name of the ship as it appears in the first column of the list, shall, in all cases and independently of its length, be counted as one word.

3. Radiograms framed with the aid of the International Code of Signals shall be transmitted to their destination without being translated.

4. Rates

ARTICLE XVI

1. The coastal rate and the shipboard rate shall be fixed in accordance with the tariff per word, pure and simple, on the basis of an equitable remuneration for the radio work, with an optional minimum rate per radiogram.

The coastal rate shall not exceed 60 centimes (11.6 cents) a word, and the shipboard rate shall not exceed 40 centimes (7.7 cents) a word. However, each management shall be at liberty to authorize coastal and shipboard rates higher than such maxima in the case of stations of ranges exceeding 400 nautical miles, or of stations whose work is exceptionally difficult owing to physical conditions in connection with the installation or working of the same.

The optional minimum rate per radiogram shall not be higher than the coastal rate or shipboard rate for a radiogram of ten words.

2. In the case of radiograms proceeding from or destined for a country and exchanged directly with the coastal stations of such country, the rate applicable to the transmission over the telegraph lines shall not, on the average, exceed the inland rate of such country.

Such rate shall be computed per word, pure and simple, with an optional minimum rate which shall not exceed the rate for ten words. It shall be stated in francs by the management of the radio service of the country to which the coastal station is subject.

In the case of countries of the European system, with the exception of Russia and Turkey, there shall be but one rate for the territory of each country.

ARTICLE XVII

1. When a radiogram proceeding from a ship and intended for the coast passes through one or two shipboard stations, the charges shall comprise, in addition to the rates of the shipboard station of origin, the coastal station and the telegraph lines, the shipboard rate of each of the ships which have participated in the transmission.

2. The sender of a radiogram proceeding from the coast and intended for a ship may require that his message be transmitted by way of one

or two stations on shipboard; he shall deposit for this purpose an amount equal to the radio and telegraph rates and, in addition, a sum to be fixed by the office of origin, as surety for the payment to the intermediary shipboard stations of the transit rates fixed by paragraph 1. He shall further pay, at his option, either the rate for a telegram of five words or the price of the postage on a letter to be sent by the coastal station to the office of origin giving the necessary information for the liquidation of the amounts deposited.

The radiogram shall then be accepted at the sender's risk; it shall show before the address the prepaid instruction, to wit: "X retransmissions telegraph" or "X retransmissions letter" according to whether the sender desired the information necessary for the liquidation of the deposits to be furnished by telegraph or by letter.

3. The rate for radiograms proceeding from a ship intended for another ship, and forwarded through one or two intermediary coastal stations, shall comprise:

The shipboard rates of the two ships, the coastal rate of the coastal station or two coastal stations, as the case may be, and the telegraph rate, when necessary, applicable to the transmission between the two coastal stations.

4. The rate for radiograms exchanged between ships without the intervention of a coastal station shall comprise the shipboard rates of the vessels of origin and destination together with the shipboard rates of the intermediary stations.

5. The coastal and shipboard rates accruing to the stations of transit shall be the same as those fixed for such stations when they are stations of origin or destination. In no case shall they be collected more than once.

6. In the case of every coastal station acting as intermediary, the rate to be collected for the service of transit shall be the highest coastal rate applicable to direct communication with the two ships concerned.

ARTICLE XVIII

The country within whose territory a coastal station is established which serves as intermediary for the exchange of radiograms between a station on board ship and another country shall be considered, so far as the application of telegraph rates is concerned, as the country of origin or of destination of such radiograms, and not as the country of transit.

5. Collection of Charges

ARTICLE XIX

The total charge for radiograms shall be collected of the sender, with the exception of:

(1) Charges for special delivery (Art. LVIII, par. 1, of the Telegraph Regulations); (2) Charges applicable to inadmissible combinations or alterations of words noted by the office or station of destination (Art. XIX, par. 9, of the Telegraph Regulations) such charges being collected of the addressee.

Stations on shipboard shall to that end have the necessary tariffs. They shall be at liberty, however, to obtain information from coastal stations on the subject of rates for radiograms for which they do not possess all the necessary data.

2. The counting of words by the office of origin shall be conclusive in the case of radiograms intended for ships and that of the shipboard station of origin shall be conclusive in the case of radiograms proceeding from ships, both for purposes of transmission and of the international accounts. However, when the radiogram is worded wholly or in part, either in one of the languages of the country of destination, in the case of radiograms proceeding from ships, or in one of the languages of the country to which the ship is subject, in the case of radiograms intended for ships, and contains combinations or alterations of words contrary to the usage of such language, the bureau or shipboard station of destination, as the case may be, shall have the right to recover from the addressee the amount of charge not collected. In case of refusal to pay, the radiogram may be withheld.

6. Transmission of Radiograms

(A) SIGNALS OF TRANSMISSION

ARTICLE XX

The signals to be employed are those of the Morse International Code.

ARTICLE XXI

Ships in distress shall use the following signal:

. . . — — — . . .

repeated at brief intervals, followed by the necessary particulars.

As soon as a station hears the signal of distress it shall cease all correspondence and not resume it until after it has made sure that the correspondence to which the call for assistance has given rise is terminated.

Stations which hear a signal of distress shall conform to the instructions given by the ship making such signal as regards the order of the messages or their cessation.

In case the call letters of a particular station are added at the end of the series of calls for assistance, the answer to the call shall be incumbent upon that station alone unless such station fails to reply. If the call for assistance does not specify any particular station, every station hearing such call shall be bound to answer it.

ARTICLE XXII

For the purpose of giving or requesting information concerning the radio service, stations shall make use of the signals contained in the list appended to the present regulations.

(B) ORDER OF TRANSMISSION

ARTICLE XXIII

Between two stations radiograms of the same order shall be transmitted one by one, by the two stations alternately, or in series of several radiograms, as the coastal station may indicate, provided the duration of the transmission of each series does not exceed fifteen minutes.

(C) METHOD OF CALLING RADIO STATIONS AND TRANSMISSION OF RADIOGRAMS

ARTICLE XXIV

1. As a general rule, it shall be the shipboard station that calls the coastal station whether it has radiograms to transmit or not.

2. In waters where the radio traffic is very great (British Channel, etc.), a coastal station should not, as a general rule, be called by a shipboard station unless the former is within normal range of the shipboard station and not until the distance of the vessel from the coastal station is less than 75 per cent of the normal range of the latter.

3. Before proceeding to call, the coastal station or the station on shipboard shall adjust its receiving apparatus to its maximum sensibility and make sure that no other correspondence is being carried on

within its radius of action; if it finds otherwise, it shall wait for the first pause, unless it is convinced that its call will not be likely to disturb the correspondence in progress. The same applies in case the station desires to answer a call.

4. For calling, every station shall use the normal wave of the station it wishes to call.

5. If in spite of these precautions the transmission of a radiogram is impeded at any place, the call shall cease upon the first request from a coastal station open to public correspondence. The latter station shall in such case indicate the approximate length of time it will be necessary to wait.

6. The station on shipboard shall make known to every coastal station to which it has signaled its presence the moment at which it proposes to cease its operations and the probable duration of the interruption.

ARTICLE XXV

1. The call shall comprise the signal

— . — . — ,

the call letters of the station called transmitted three times, the word "from" (de) followed by the call letters of the sending station transmitted three times.

2. The called station shall answer by making the signal

— . — . — ,

followed by the call letters of the corresponding station transmitted three times, the word "from," its own call letters, and the signal

— . — .

3. Stations desiring to enter into communication with ships, without, however, knowing the names of the ships within their radius of action, may employ the signal — . — . — . — . — (signal of inquiry). The provisions of paragraphs 1 and 2 are likewise applicable to the transmission of a signal of inquiry and to the answer to such signal.

ARTICLE XXVI

If a station called does not answer the call (Article XXV) transmitted three times at intervals of two minutes, the call shall not be resumed until after an interval of fifteen minutes, the station issuing the call having first made sure of the fact that no radio correspondence is in progress.

ARTICLE XXVII

Every station which has occasion to transmit a radiogram requiring the use of high power shall first send out three times the signal of warning — — — . . — — — , with the minimum of power necessary to reach the neighboring stations. It shall not begin to transmit with high power until 30 seconds after sending the signal of warning.

ARTICLE XXVIII

1. As soon as the coastal station has answered, the shipboard station shall furnish it with the following data in case it has messages to transmit; such data shall likewise be furnished upon request from the coastal station:

- (a) The approximate distance, in nautical miles, of the vessel from the coastal station;
- (b) The position of the vessel indicated in a concise form and adapted to the circumstances of the case;
- (c) Her next port of call;
- (d) The number of radiograms, if they are of normal length, or the number of words, if the messages are unusually long.

The speed of the ship in nautical miles shall also be given if specially requested by the coastal station.

2. The coastal station shall answer stating, as provided in paragraph 1, either the number of radiograms or the number of words to be transmitted to the ship, and also the order of transmission.

3. If the transmission can not take place immediately, the coastal station shall inform the station on shipboard of the approximate length of time that it will be necessary to wait.

4. If a shipboard station called can not receive for the moment, it shall inform the station calling of the approximate length of time that it will be necessary to wait.

5. In the exchange of messages between two stations on shipboard, it shall fall to the station called to fix the order of transmission.

ARTICLE XXIX

When a coastal station receives calls from several shipboard stations, it shall decide the order in which such stations shall be admitted to exchange their messages.

In fixing this order the coastal station shall be guided exclusively by

the necessity of permitting each station concerned to exchange the greatest possible number of radiograms.

ARTICLE XXX

Before beginning the exchange of correspondence the coastal station shall advise the shipboard station whether the transmission is to be effected in the alternate order or by series (Article XXIII); it shall then begin the transmission or follow up the preliminaries with the signal

— . — .

ARTICLE XXXI

The transmission of the radiogram shall be preceded by the signal

— . — . —

and terminated by the signal

. — . — .

followed by the name of the sending station and by the signal

— . — .

In the case of a series of radiograms, the name of the sending station and the signal — . — shall only be given at the end of the series.

ARTICLE XXXII

When a radiogram to be transmitted contains more than 40 words, the sending station shall interrupt the transmission by the signal . . — . . after each series of about 20 words and shall not resume it until after it has obtained from the receiving station a repetition of the last word duly received, followed by the said signal, or, if the reception is good, by the signal — . — .

In the case of transmission by series, acknowledgment of receipt shall be made after each radiogram.

Coastal stations engaged in the transmission of long radiograms shall suspend the transmission at the end of each period of 15 minutes, and remain silent for a period of three minutes before resuming the transmission.

Coastal and shipboard stations working under the conditions specified in Article XXXV, par. 2, shall suspend work at the end of each period of 15 minutes and listen in with a wave length of 600 meters during a period of three minutes before resuming the transmission.

ARTICLE XXXIII

1. When the signals become doubtful every possible means shall be resorted to to finish the transmission. To this end the radiogram shall be transmitted three times at most at the request of the receiving station. If in spite of such triple repetition the signals are still unreadable the radiogram shall be cancelled.

If no acknowledgment of receipt is received the transmitting station shall again call up the receiving station. If no reply is made after three calls the transmission shall not be followed up any further. In such case the sending station shall have the privilege of obtaining the acknowledgment of receipt through the medium of another radio station, using, when necessary, the lines of the telegraph system.

2. If in the opinion of the receiving station the radiogram, although imperfectly received, is nevertheless capable of transmission, said station shall enter the words "reception doubtful" at the end of the preamble and let the radiogram follow. In such case the management of the radio service of the country, to which the coastal station is subject shall claim the charges in conformity with Article XLII of the present regulations. If, however, the shipboard station subsequently transmits the radiogram to another coastal station of the same management, the latter can claim only the rates applicable to a single transmission.

(D) ACKNOWLEDGMENT OF RECEIPT AND CONCLUSION OF WORK

ARTICLE XXXIV

1. Receipt shall be acknowledged in the form prescribed by the International Telegraph Regulations; it shall be preceded by the call letters of the transmitting station and followed by those of the receiving station.

2. The conclusion of a correspondence between two stations shall be indicated by each of the two stations by means of the signal

. . . — . —

followed by its own call letters.

(E) DIRECTIONS TO BE FOLLOWED IN SENDING RADIOGRAMS

ARTICLE XXXV

1. In general, the shipboard stations shall transmit their radiograms to the nearest coastal station.

Nevertheless, if a shipboard station has the choice between several coastal stations at equal or nearly equal distances, it shall give the preference to the one established on the territory of the country of destination or normal transit for its radiograms.

2. A sender on board a vessel shall, however, have the right to designate the coastal station through which he desires to have his radiogram transmitted. The station on shipboard shall then wait until such coastal station shall be the nearest.

In exceptional cases transmission may be made to a more distant coastal station, provided that:

(a) The radiogram is intended for the country in which such coastal station is situated and emanates from a ship subject to that country;

(b) Both stations use for calling and transmission a wave length of 1,800 meters;

(c) Transmission with this wave length does not interfere with a transmission made by means of the same wave length by a nearer coastal station;

(d) The station on shipboard is more than 50 nautical miles distant from any coastal station given in the list. The distance of 50 miles may be reduced to 25 miles provided the maximum power at the terminals of the generator does not exceed 5 kilowatts and that the stations on shipboard are established in conformity with Articles VII and VIII. This reduction in the distance shall not be admissible in the seas, bays or gulfs of which the shores belong to one country only and of which the opening to the high sea is less than 100 miles wide.

7. Delivery of Radiograms at their Destination

ARTICLE XXXVI

When for any cause whatever a radiogram proceeding from a vessel at sea and intended for the coast can not be delivered to the addressee, a notice of nondelivery shall be issued. Such notice shall be transmitted to the coastal station which received the original radiogram. The latter, after verifying the address, shall forward the notice to the ship, if possible, by the intervention, if need be, of another coastal station of the same country or of a neighboring country.

When a radiogram received by a shipboard station can not be delivered, the station shall notify the office of the origin by official notice. In the case of radiograms emanating from the coast, such notice shall

be transmitted, whenever practicable, to the coastal station through which the radiogram has passed in transit; otherwise, to another coastal station of the same country or of a neighboring country.

ARTICLE XXXVII

If the ship for which a radiogram is intended has not signalled her presence to the coastal station within the period designated by the sender, or, in the absence of such designation, by the morning of the 8th day following, the coastal station shall so notify the office of origin which shall in turn inform the sender.

The latter shall have the right to ask, by a paid official notice, sent by either telegraph or mail and addressed to the coastal station, that his radiogram be held for a further period of 9 days for transmission to the vessel, and so on. In the absence of such request, the radiogram shall be put aside as not transmissible at the end of the 9th day (exclusive of the day of posting).

Nevertheless, if the coastal station is certain that the vessel has left its radius of action before it has been able to transmit the radiogram to her, such station shall immediately so notify the office of origin which shall without delay inform the sender of the cancellation of the message. The sender may, however, by a paid official notice, request the coastal station to transmit the radiogram the next time the vessel shall pass.

8. *Special Radiograms*

ARTICLE XXXVIII

The following radiograms only shall be accepted for transmission.

(1) Radiograms with answer prepaid. Such radiograms shall show before the address the indication "Answer prepaid" or "RP" supplemented by a statement of the amount paid in advance for the answer, thus: "Response Payee fr. x," or "R P fr. x";

The reply voucher issued by a station on shipboard shall carry with it the right to send, within the limits of its value, a radiogram to any destination whatever from the station on shipboard which has issued such voucher.

(2) Radiograms calling for repetition of message (for purposes of verification);

(3) Special delivery radiograms. Only, however, in cases where the amount of the charges for special delivery collected of the addressee.

Countries which can not accept such radiograms shall make a declaration to this effect to the International Bureau. Special delivery radiograms with charges collected of the sender may be accepted when they are intended for the country within whose territory the corresponding station is located.

(4) Radiograms to be delivered by mail;

(5) Multiple radiograms;

(6) Radiograms calling for acknowledgment of receipt. But only as regards notification of the date and hour at which the coastal station shall have transmitted to the station on shipboard the radiogram addressed to the latter.

(7) Paid service notices. Except those requesting a repetition or information. Nevertheless all paid service notices shall be accepted in transmission over the telegraph lines.

(8) Urgent radiograms. But only in transmission over the telegraph lines and subject to the application of the International Telegraph Regulations.

ARTICLE XXXIX

Radiograms may be transmitted by a coastal station to a ship, or by a ship to another ship, with a view to being forwarded by mail from a port of call of the ship receiving the radiogram.

Such radiogram shall not be entitled to any radio retransmission.

The address of such radiogram shall embrace the following:

(1) The paid designation "mail" followed by the name of the port at which the radiogram is to be mailed;

(2) The name and complete address of the addressee;

(3) The name of the station on shipboard by which the radiogram is to be mailed;

(4) When necessary, the name of the coastal station.

Example: Mail Buenosaires 14 Calle Prat Valparaiso Avon Lizard.

The rate shall comprise, in addition to the radio and telegraph rates, a sum of 25 centimes (.048 cents) for the postage on the radiogram.

9. Files

ARTICLE XL

The originals of radiograms together with the documents relating thereto retained by the managements of the radio service shall be kept,

with all the necessary precautions as regards secrecy, for a period of at least fifteen months beginning with the month following that of the posting of the radiogram.

Such originals and documents shall, as far as practicable, be sent at least once a month by the shipboard stations to the management of the radio service to which they are subject.

10. Rebates and Reimbursements

ARTICLE XLI

1. With regard to rebates and reimbursements, the International Telegraph Regulations shall be applicable, taking into account the restrictions specified in Articles XXXVIII and XXXIX of the present regulations and subject to the following reservations:

The time employed in the transmission of radiograms and the time that radiograms remain in a coastal station in the case of radiograms intended for ships, or in the station on shipboard in the case of radiograms proceeding from ships, shall not be counted as delays as regards rebates or reimbursements.

If the coastal station notifies the office of origin that a radiogram can not be transmitted to the ship addressed, the management of the radio service of the country of origin shall immediately instigate reimbursement to the sender of the coastal and shipboard rates relating to the radiogram. In such case, the refunded charges shall not enter into the accounts provided for by Article XLII. but the radiogram shall be mentioned therein as a memorandum.

Reimbursements shall be borne by the different managements of the radio service and private enterprises which have taken part in the transmission of the radiogram, each management or private enterprise relinquishing its share of the rate. Radiograms to which Articles 7 and 8 of the Convention of St. Petersburg are applicable shall remain subject, however, to the provisions of the International Telegraph Regulations, except when the acceptance of such radiograms is the result of an error made by the telegraph service.

2. When the acknowledgment of receipt of a radiogram has not reached the station which has transmitted the message, the charges shall be refunded only if the fact has been established that the radiogram is entitled to reimbursement.

11. Accounts and Payment of Charges

ARTICLE XLII

1. The coastal and shipboard charges shall not enter into the accounts provided for by the International Telegraph Regulations.

The accounts regarding such charges shall be liquidated by the managements of the radio service of the countries concerned. They shall be drawn up by the radio managements to which the coastal stations are subject, and communicated by them to the radio managements concerned. In cases where the working of the coastal stations is independent of the management of the radio service of the country, the party working such stations may be substituted, as regards the accounts, for the radio management of such country.

2. For transmission over the telegraph lines radiograms shall be treated, so far as the payment of rates is concerned, in conformity with the International Telegraph Regulations.

3. For radiograms proceeding from ships, the radio management to which the coastal station is subject shall charge the radio management to which the shipboard station of origin is subject with the coastal and ordinary telegraph rates, the total charges collected for answers prepaid, the coastal and telegraph rates collected for repetition of message (for purposes of verification), charges relating to special delivery (in the case provided for in Article XXXVIII), or delivery by mail, and those collected for additional copies (TM). The radio management to which the coastal station is subject shall credit, when the case arises, through the channel of the telegraph accounts and through the medium of the offices which have participated in the transmission of the radiograms, the radio management to which the office of destination is subject with the total charges relating to answers prepaid. With respect to the telegraph rates and the charges relating to special delivery or delivery by mail, and to additional copies, the procedure shall be as prescribed in the Telegraph Regulations, the coastal station being considered as the telegraph office of origin.

For radiograms intended for a country lying beyond the country to which the coastal station belongs, the telegraph charges to be liquidated in conformity with the above provisions shall be those which result either from tables "A" and "B" annexed to the International Telegraph Regulations, or from special arrangements concluded between the radio managements of adjacent countries and published by such

managements, and not the charges which might be collected in accordance with the special provisions of Articles XXIII, par. 1, and XXVII, par. 1, of the Telegraph Regulations.

For radiograms and paid service notices intended for ships, the radio management to which the office of origin is subject shall be charged directly by that to which the coastal station is subject with the coastal and shipboard rates. However, the total charges relating to answers prepaid shall be credited, if there is occasion, from country to country, through the channel of the telegraph accounts, until they reach the radio management to which the coastal station is subject. As regards the telegraph charges and the charges relating to delivery by mail and additional copies, the procedure shall be as prescribed in the Telegraph Regulations. The radio management to which the coastal station is subject shall credit that to which the ship of destination is subject with the shipboard rate, if there is occasion, with the rates accruing to the intermediary shipboard stations, the total charge collected for answers prepaid, the shipboard rates for repetition of message (for purposes of verification), and the charges collected for the preparation of additional copies and for delivery by mail.

Paid service notices and answers prepaid shall be treated in the radio accounts in all respects the same as other radiograms.

For radiograms transmitted by means of one or two intermediary stations on shipboard, each one of such stations shall charge the shipboard station of origin, in the case of a radiogram proceeding from a ship, or that of destination, in the case of a radiogram intended for a ship, with the shipboard rate accruing to it for transit.

4. In general, the liquidation of accounts relating to correspondence between stations on shipboard shall be effected directly between the companies working such stations, the station of origin being charged by the station of destination.

5. The monthly accounts serving as a basis for the special accounts of radiograms shall be made out for each radiogram separately with all the necessary data within a period of six months from the month to which they refer.

6. The governments reserve the right to enter into special agreements among themselves and with private companies (parties operating radio stations, shipping companies, etc.) with a view of adopting other provisions with regard to accounts.

12. International Bureau

ARTICLE XLIII

The additional expenses resulting from the work of the International Bureau so far as radio telegraphy is concerned shall not exceed 80,000 francs a year, exclusive of the special expenses arising from the convening of the international conference.

The managements of the radio service of the contracting states shall, so far as contribution to the expenses is concerned, be divided into six classes, as follows:

1st Class:

Union of South Africa; Germany; United States of America; Alaska; Hawaii and the other American possessions in Polynesia; Philippine Islands; Porto Rico and the American possessions in the Antilles; Panama Canal Zone; Argentine Republic; Australia; Austria; Brazil; Canada; France; Great Britain; Hungary; British India; Italy; Japan; New Zealand; Russia; Turkey.

2nd Class:

Spain.

3rd Class:

Russian Central Asia (littoral of the Caspian Sea); Belgium; Chile; Chosen, Formosa, Japanese Sakhalin and the leased territory of Kwantung; Dutch Indies; Norway; Netherlands; Portugal; Roumania; Western Siberia (littoral of the Arctic Ocean); Eastern Siberia (littoral of the Pacific Ocean); Sweden.

4th Class:

German East Africa; German Southwest Africa; Kamerun; Togo Land; German Protectorates in the Pacific; Denmark; Egypt; Indo-China; Mexico; Siam; Uruguay.

5th Class:

French West Africa; Bosnia-Herzegovina; Bulgaria; Greece; Madagascar; Tunis.

6th Class:

French Equatorial Africa; Portuguese West Africa; Portuguese East Africa and the Portuguese possessions in Asia; Bokhara; Belgian Congo; Colony of Curacao; Spanish Colony of the Gulf of Guinea; Eritrea; Khiva; Morocco; Monaco; Persia; San Marino; Italian Somaliland.

ARTICLE XLIV

The management of the radio service of the different countries shall forward to the International Bureau a table in conformity with the annexed blank, containing the data enumerated in said table for stations such as referred to in Article V of the regulations. Changes occurring and additional data shall be forwarded by the radio managements to the International Bureau between the 1st and 10th days of each month. With the aid of such data the International Bureau shall draw up the list provided for in Article V. The list shall be distributed to the radio managements concerned. The list and the supplements thereto may also be sold to the public at the cost price.

The International Bureau shall see to it that the same call letters for several radio stations shall not be adopted.

13. Meteorological Radiograms, Time Signals and other Radiograms

ARTICLE XLV

1. The managements of the radio service shall take the necessary steps to supply their coastal stations with meteorological radiograms containing indications concerning the district of such stations. Such radiograms, the text of which shall not exceed 20 words, shall be transmitted to ships upon request. The rate for such meteorological radiograms shall be carried to the account of the ships to which they are addressed.

2. Meteorological observations made by certain vessels designated for this purpose by the country to which they are subject, may be transmitted once a day, as paid service notices, to the coastal stations authorized to receive the same by the managements concerned, who shall likewise designate the meteorological offices to which such observations shall be addressed by the coastal stations.

3. Time signals and meteorological radiograms shall be transmitted one after the other in such a way that the total time occupied in their transmission shall not exceed ten minutes. As a general rule, all radio stations whose transmissions might interfere with the reception of such signals and radiograms, shall remain silent during their transmission in order that all stations desiring it may be able to receive the same. Exception shall be made in cases of distress calls and of state telegrams.

4. The managements of the radio service shall give to agencies of maritime information such data regarding losses and casualties at sea or other information of general interest to navigation, as the coastal stations may properly report.

14. Miscellaneous Provisions

ARTICLE XLVI

The exchange of correspondence between shipboard stations shall be carried on in such a manner as not to interfere with the service of the coastal stations, the latter, as a general rule, being accorded the right of priority for the public service.

ARTICLE XLVII

Coastal stations and stations on shipboard shall not be bound to participate in the retransmission of radiograms except in cases where direct communication cannot be established between the stations of origin and destination.

The number of such retransmissions shall, however, be limited to two.

In the case of radiograms intended for the coast, retransmission shall take place only for the purpose of reaching the nearest coastal station.

Retransmission shall in every case be subject to the condition that the intermediate station which receives the radiogram in transit is in a position to forward it.

ARTICLE XLVIII

If the route of a radiogram is partly over telegraph lines, or through radio stations subject to a non-contracting government, such radiograms may be transmitted provided the management of the radio service to which such lines or stations are subject have declared that, if the occasion should arise, they will comply with such provisions of the convention and of the regulations as are indispensable to the regular transmission of radiograms and that the payment of charges is insured. Such declaration shall be made to the International Bureau and communicated to the offices of the Telegraph Union.

ARTICLE XLIX

Modifications of the present regulations which may be rendered necessary in consequence of the decisions of subsequent telegraph confer-

ences shall go into effect on the date fixed for the application of the provisions adopted by each one of such conferences.

ARTICLE L

The provisions of the International Telegraph Regulations shall be applicable analogously to radio correspondence in so far as they are not contrary to the provisions of the present regulations. The following provisions of the Telegraph Regulations, in particular, shall be applicable to radio correspondence: Article XXVII, paragraphs 3 to 6, relating to the collection of charges; Articles XXVI and XLI relating to the indication of the route to be followed; Article LXXV, paragraph 1, LXXVIII, paragraphs 2 to 4, and LXXIX, paragraphs 2 and 4, relating to the preparation of accounts. However:— (1) The period of six months provided by paragraph 2 of Article LXXIX of the Telegraph Regulations for the verification of accounts shall be extended to nine months in the case of radiograms; (2) The provisions of Article XVI, paragraph 2, shall not be considered as authorizing gratuitous transmission, through radio stations, of service telegrams relating exclusively to the telegraph service, nor the free transmission over the telegraph lines of service telegrams relating exclusively to the radio service; (3) The provisions of Article LXXIX, paragraphs 3 and 5, shall not be applicable to radio accounts. As regards the application of the provisions of the Telegraph Regulations, coastal stations shall be considered as offices of transit except when the Radio Regulations expressly stipulate that such stations shall be considered as offices of origin or of destination.

In conformity with Article 11 of the Convention of London, the present regulations shall go into effect on the first day of July, 1913.

In witness whereof the respective plenipotentiaries have signed one copy of these regulations, which shall be deposited in the archives of the British Government, and a copy of which shall be transmitted to each of the parties.

For Germany and the German Protectorates:

B. KOEHLER

O. WACHENFELD

DR. KARL STRECKER

SCHRADER

GOETSCH

DR. EMIL KRAUSS

FIELITZ.

For the United States and the possessions of the United States:

JOHN R. EDWARDS
JNO. Q. WALTON
WILLIS L. MOORE
LOUIS W. AUSTIN
GEORGE OWEN SQUIER
EDGAR RUSSEL
C. MCK. SALTZMAN
DAVID WOOSTER TODD
JOHN HAYS HAMMOND, Jr.
WEBSTER
W. D. TERRELL
JOHN I. WATERBURY.

For Argentine Republic:

VICENTE J. DOMINGUEZ.

For Austria:

DR. FRITZ RITTER WAGNER VON JAUREGG
DR. RUDOLPH RITTER SPEIL V. OSTHEIM.

For Hungary:

CHARLES FOLLÉRT
DR. DE HENNYEY.

For Bosnia-Herzegovina:

H. GOINGER, G. M.
ADOLF DANINGER
A. CICOLI
ROMEO VIO.

For Belgium:

J. BANNEUX
DELDIME.

For Belgian Congo:

ROBERT B. GOLDSCHMIDT.

For Brazil:

DR. FRANCISCO BHERING.

For Bulgaria:

IV. STOYANOVITCH.

For Chile:

C. E. RICKARD.

For Denmark:

N. MEYER

J. A. VÖHTZ
R. N. A. FABER
T. F. KRARUP.

For Egypt:

J. S. LIDDELL.

For Spain and the Spanish Colonies:

JACOBO GARCIA ROURE
JUAN DE CARRANZA Y GARRIDO
JACINTO LABRADOR
ANTONIO NIETO
TOMÁS FERNANDEZ QUINTANA
JAIME JANER ROBINSON.

For France and Algeria:

A. FROUIN.

For French West Africa:

A. DUCHÊNE.

For French Equatorial Africa:

A. DUCHÊNE.

For Indo-China:

A. DUCHÊNE.

For Madagascar:

A. DUCHÊNE.

For Tunis:

ET. DE FELCOURT.

For Great Britain and the various British Colonies and Protectorates:

H. BABINGTON SMITH
E. W. FARNALL
E. CHARLTON
G. M. W. MACDONOGH.

For Union of South Africa:

RICHARD SOLOMON.

For Australian Federation:

CHARLES BRIGHT.

For Canada:

G. J. DESBARATS.

For British India:

H. A. KIRK
DEMPSTER.

For New Zealand:

C. WRAY PALLISER.

For Greece:

C. DOSIOS.

For Italy and the Italian Colonies:

PROF. A. BATTELLI.

For Japan and for Chosen, Formosa, Japanese Sakhalin, and the leased territory of Kwantung:

TETSUJIRO SAKANO

KENJI IDE

RIUJI NAKAYAMA

SEIICHI KUROSE.

For Morocco:

MOHAMMED EL KABADJ

U. ASENSIO.

For Monaco:

FR. ROUSSEL.

For Norway:

HEFTYE

K. A. KNUDSSÖN.

For Netherlands:

G. J. C. A. POP

J. P. GUÉPIN.

For Dutch Indies and the Colony of Curaçao:

PERK

F. VAN DER GOOT.

For Persia:

MIRZA ABDUL GHAFAR KHAN.

For Portugal and the Portuguese Colonies:

ANTONIO MARIA DA SILVA.

For Roumania:

C. BOERESCU.

For Russia and the Russian possessions and Protectorates:

N. DE ETTER

P. OSSADTCHY

A. EULER

SERGUEIEVITCH

V. DMITRIEFF

D. SOKOLTSOW

(SUPPLEMENT TO ARTICLE XXII OF THE REGULATIONS)

List of Abbreviations to be used in Radio Communications

Abbreviation.	Question.	Answer or Notice.
1	2	3
— — — — —	(C Q).	Signal of enquiry made by a station desiring to communicate.
— — — — —	(T R).	Signal announcing the sending of particulars concerning a station on shipboard (Art. XXII).
— — — — —	(I).....	Signal indicating that a station is about to send at high power.
PRB	Do you wish to communicate by means of the International Signal Code?	I wish to communicate by means of the International Signal Code.
QRA	What ship or coast station is that?	This is.....
QRB	What is your distance?	My distance is.....
QRC	What is your true bearing?	My true bearing is.....degrees.
QRD	Where are you bound for?	I am bound for.....
QRF	Where are you bound from?	I am bound from.....
QRG	What line do you belong to?	I belong to the.....Line.
QRH	What is your wave length in meters?	My wave length is.....meters.
QRJ	How many words have you to send?	I have.....words to send.
QRK	How do you receive me?	I am receiving well.
QRL	Are you receiving badly? Shall I send 20. for adjustment?	I am receiving badly. Please send 20. for adjustment.
QRM	Are you being interfered with?	I am being interfered with.
QRN	Are the atmospherics strong?	Atmospherics are very strong.
QRO	Shall I increase power?	Increase power.
QRP	Shall I decrease power?	Decrease power.
QRQ	Shall I send faster?	Send faster.
QRS	Shall I send slower?	Send slower.
QRT	Shall I stop sending?	Stop sending.
QRU	Have you anything for me?	I have nothing for you.
QRV	Are you ready?	I am ready. All right now.
QRW	Are you busy?	I am busy (or, I am busy with.....). Please do not interfere.
QRX	Shall I stand by?	Stand by. I will call you when required.
QRY	When will be my turn?	Your turn will be No.....
QRZ	Are my signals weak?	Your signals are weak.
QSA	Are my signals strong?	Your signals are strong.
QSB	Is my tone bad?	The tone is bad.
QSC	Is my spark bad?	The spark is bad.
QSD	Is my spacing bad?	Your spacing is bad.
QSE	What is your time?	My time is.....
QSF	Is transmission to be in alternate order or in series?	Transmission will be in alternate order.
QSG	— — — — —	Transmission will be in series of 5 messages.
QSH	— — — — —	Transmission will be in series of 10 messages.
QSI	— — — — —	Collect.....
QSK	What rate shall I collect for.....?	The last radiogram is cancelled.
QSL	Is the last radiogram cancelled?	Please acknowledge.
QSM	Did you get my receipt?	My true course is.....degrees.
QSN	What is your true course?	I am not in communication with land.
QSO	Are you in communication with land?	I am in communication with.....(through.....)
QSP	Are you in communication with any ship or station (or: with.....)?	Inform.....that I am calling him.
QSP	Shall I inform.....that you are calling him?	
QSQ	Is.....calling me?	You are being called by.....
QSR	Will you forward the radiogram?	I will forward the radiogram.
QST	Have you received the general call?	General call to all stations.
QSU	Please call me when you have finished (or: at..... o'clock)?	Will call when I have finished.
QSV	Is public correspondence being handled?	Public correspondence is being handled. Please do not interfere.
QSW	Shall I increase my spark frequency?	Increase your spark frequency.
QSY	Shall I send on a wave length of.....meters?	Let us change to the wave length of.....meters.
QSX	Shall I decrease my spark frequency?	Decrease your spark frequency.

Public correspondence is any radio work, official or private, handled on commercial wave lengths.

When an abbreviation is followed by a mark of interrogation, it refers to the question indicated for that abbreviation.

Stations.	EXAMPLES
A Q R A?	What is the name of your station?
B Q R A Campania	This is the Campania.
A Q R G?	To what line do you belong?
B Q R G Cunard Q R Z	I belong to the Cunard Line. Your signals are weak.

Station A then increases the power of its transmitter and sends:

A Q R K?	How are you receiving?
B Q R K	I am receiving well.
Q R B 80	The distance between our stations is 80 nautical miles.
Q R C 62	My true bearing is 62 degrees, etc.

INTERNATIONAL TELEGRAPH CONVENTION

Signed at St. Petersburg, July 10/22, 1875

[Articles 1, 2, 3, 5, 6, 7, 8, 11, 12, 17.]¹

ARTICLE I

The high contracting parties recognize that all persons have a right to correspond by international telegraph.

ARTICLE II

They engage to make all necessary provisions to insure the secrecy and quick despatch of such correspondence.

ARTICLE III

Nevertheless they declare that they do not assume any responsibility in respect to the international telegraph service.

¹ Translated from the convention, printed in French, in *British and Foreign State Papers*, Vol. 66, pp. 19-88.